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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/589,060	WANG, YE-KUI	
	Examiner	Art Unit	
	JONATHAN WILLIS	2445	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 November 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,7-15,17-20 and 22-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7-15,17-20 and 22-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/12/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendments filed on 11/16/2010. Claims 1-3, 7-12, 14, 17-20, and 23 have been amended. Claims 4-5, 16, and 21 have been cancelled. Claims 24-41 have been newly added. Claims 1-4, 7-15, 17-20 and 22-41 are pending examination.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim(s) 1 and 24 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to particular machine, or (2) transform underlying subject matter (such as an article or material) to a different state or thing. See page 10 of In Re Bilski 88 USPQ2d 1385. The instant claims are neither positively tied to a particular machine that accomplishes the claimed method steps nor transform underlying subject matter, and therefore do not qualify as a statutory process.

The method of claim 1 including steps of:

(A) reporting quality of a media stream/ receiving a report

is broad enough that the claim could be completely performed mentally, verbally telling/hearing from another person their opinion of the quality of a media stream.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2005/0089043 A1 to Seckin et al. (hereinafter referred to as Seckin) in view of US 2004/0139088 A1 to Mandato et al. (hereinafter referred to as Mandato).

6. In regard to claim 1, **Seckin** teaches a method comprising:

reporting a quality of a streaming of at least one media stream (*e.g. "Data for one or more accepted QoE metrics is collected during the session, and the metric data is communicated between the client and the server,"* **in [0007] Lines 9-11**) based on at least one selected quality metric (*e.g. "at least one quality of experience (QoE) metric indicative of a characteristic that affects quality in the wireless communication environment,"* **in [0007] Lines 3-5**),

wherein said at least one selected quality metric (*e.g. "Corruption duration,"* **in [0074] Line 1**) is a quality of experience metric (*e.g. "quality of experience (QoE)*

metric," **in [0007] Lines 3-5**) that is at least partially based on a decision whether at least one frame of said at least one media stream is a good frame (*e.g. "Corruption duration, M, is the time period from the NPT time of the last good frame before the corruption, to the NPT time of the first subsequent good frame or the end of the reporting period (whichever is sooner),"* **in [0074] Lines 1-4**), wherein said reporting of said quality of said streaming is further based on a quality metrics class from a pre-defined set of at least two quality metrics classes (*see different types of metrics as different metric classes, e.g. "All the metrics defined below are applicable to at least one of audio, video, speech and timed text media types,"* **in [0073] Lines 1-2**), and wherein each quality metrics class in said pre-defined set of at least two quality metrics classes defines a different set of rules on how to decide whether a frame of said at least one media stream is a good frame (*see Corruption Duration defining rules on how to handled Speech, Audio, and Video individually, e.g. "All the metrics defined below are applicable to at least one of audio, video, speech and timed text media types,"* **in [0073] Lines 1-2**), but

Seckin does not explicitly teach that a quality metric class is selected as claimed.

However, **Mandato** teaches QoS negotiation between peers, wherein QoS classes to be used are negotiated while establishing communication (*e.g. "pre-negotiation will focus on having peers agreeing on the types of QoS classes to use, with respect to the capabilities of each peer,"* **in [0103] Lines 4-6**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to add the feature of negotiation between QoS classes

between a client and server, as disclosed in **Mandato**, into the teachings of **Seckin**, since both references are directed to streaming protocols, hence, would be considered to be analogous based on their related fields of endeavor.

One would be motivated to do so because **Seckin** is already directed toward negotiating QoS between a client and server (*e.g. "A negotiation is performed between a client and a server to determine which of the at least one QoE metric is to be used during a session between the client and the server,"* **from Seckin in [0007]**), and **Mandato** discloses the need for establishing an agreed quality based on device capabilities (*e.g. "establishing a session of a certain quality, based on capabilities agreement during the session establishment and sustained throughout the duration of the session. The problem can be described as a lack of expressiveness in three following areas: capabilities specification, resource reservation and media stream control,"* from **Mandato in [0061]**), and since **Seckin's** classes are directed towards types of media, it is well known in the art that communication between different types of devices commonly occurs, where one device may have audiovisual capabilities while another device may only be an auditory device, and **Mandato** enhances **Seckin** by allowing only the necessary capabilities of a device to be considered in determining a level of service; thereby reducing the amount of time required to negotiate a QoS agreement (*e.g. "The benefit of this approach is that the time necessary for re-negotiation is reduced because the peers have only to refer to a negotiated state instead of performing a full negotiation cycle during streaming,"* **from Mandato in [0092]**).

7. In regard to claim 2, **Seckin-Mandato** teaches the method according to claim 1, wherein selection of said quality metrics class comprises negotiating said quality metrics class (*e.g. "types of QoS classes,"* **from Mandato in [0103] Lines 4-6**) between a client to which said media stream is streamed and a server to which said quality of said streaming is reported (*e.g. "a new RTSP header is defined to enable the PSS client 102 and server 100 to negotiate which Quality of Experience (QoE) metrics that the PSS client 102 should send, how often the metrics should be sent, and how to turn the metrics transmission,"* **from Seckin in [0037] Lines 1-5**).

One would be motivated to combine **Mandato** with **Seckin** for reasoning set forth above in claim 1.

8. In regard to claim 3, **Seckin-Mandato** teaches the method according to claim 1, wherein said streaming is controlled by a protocol that defines a quality metrics field within at least one protocol data unit (*see RTSP header as part of Packet (protocol data unit),* **in TABLE of [0037] Line 12,** *e.g. "a new RTSP header is defined to enable the PSS client 102 and server 100 to negotiate which Quality of Experience (QoE) metrics that the PSS client 102 should send, how often the metrics should be sent, and how to turn the metrics transmission,"* **from Seckin in [0037] Lines 1-5 and** *e.g. "pre-negotiation will focus on having peers agreeing on the types of QoS classes to use, with respect to the capabilities of each peer,"* **from Mandato in [0103] Lines 4-6**), wherein said quality metrics class field is capable of identifying each quality metrics class of said

pre-defined set of at least two quality metrics classes (*e.g. "All the metrics defined below are applicable to at least one of audio, video, speech and timed text media types,"* **from Seckin in [0073] Lines 1-2**).

One would be motivated to do so because **Mandato** and **Seckin** are both directed toward negotiating QoS data, and **Seckin** discloses negotiation of QoS Metrics in the header of a RTSP packet (*e.g. "a new RTSP header is defined to enable the PSS client 102 and server 100 to negotiate which Quality of Experience (QoE) metrics that the PSS client 102 should send, how often the metrics should be sent, and how to turn the metrics transmission,"* **from Seckin in [0037]**), and **Mandato's** invention can be implemented into different QoS architectures (*e.g. "key aspect of the E2ENP is that it can be used... with other types of QoS architectures. In the latter case, pre-negotiation will focus on having peers agreeing on the types of QoS classes to use,"* **from Mandato in [0103]**), and one of ordinary skill in the art would recognize that the logical implementation of negotiation of different QoS classes when combined with **Seckin** would suggest negotiating the QoS classes in a field of the header of a RTSP packet, which enhances **Seckin** by allowing only the necessary capabilities of a device to be considered in determining a level of service; thereby reducing the amount of time required to negotiate a QoS agreement (*e.g. "The benefit of this approach is that the time necessary for re-negotiation is reduced because the peers have only to refer to a negotiated state instead of performing a full negotiation cycle during streaming,"* **from Mandato in [0092]**).

9. In regard to claim 4, **Seckin -Mandato** teaches the method according to claim 3, wherein said quality metrics class field is located in a header section of said at least one protocol data unit (*e.g. "a new RTSP header is defined to enable the PSS client 102 and server 100 to negotiate which Quality of Experience (QoE) metrics that the PSS client 102 should send, how often the metrics should be sent, and how to turn the metrics transmission,"* **from Seckin in [0037] Lines 1-5 and** *e.g. "pre-negotiation will focus on having peers agreeing on the types of QoS classes to use, with respect to the capabilities of each peer,"* **from Mandato in [0103] Lines 4-6**).

One would be motivated to combine **Mandato** with **Seckin** for reasoning set forth above in claim 3.

10. In regard to claim 7, **Seckin-Mandato** teaches the method according to claim 1, wherein said set of rules defined by at least one of said quality metrics classes comprises:

deciding an earlier of a completely received I-frame of said at least one continuous media stream or an N-th completely received frame of said at least one continuous media stream after a last frame error or loss to be a good frame *(e.g. "M is derived from the NPT time of the last frame before the corruption and N, where N is optionally signalled from server 100 to client 102,"* **from Seckin in [0081]**),

wherein the N is an integer that is either signaled or defaults to (infinity) in case of a video frame or 1 in case of an audio frame (*e.g. " if N is not signalled, then M*

defaults to (infinity) (for video) or to one frame duration (for audio)," **from Seckin in [0082]**), and

deciding a frame of said at least one media stream following a good frame to be a good frame, if said frame is completely received, and said frame and all subsequent frames until the next good frame to be corrupted (*e.g. "A corrupted frame may either be an entirely lost frame, or a media frame that has quality degradation and the decoded frame is not the same as in error-free decoding. A good frame is a "completely received...Completely received" means that all the bits are received and no bit error has occurred,"* **from Seckin in [0074] - [0078])**

11. In regard to claim 8, **Seckin-Mandato** teaches the method according to claim 1, wherein said set of rules defined by at least one of said quality metric classes (*see Corruption Duration defining rules on how to handled Speech, Audio, and Video individually, e.g. "All the metrics defined below are applicable to at least one of audio, video, speech and timed text media types,"* **from Seckin in [0073] Lines 1-2**) comprises:

deciding a coded frame of said at least one media stream to be a good frame according to an error tracking algorithm (*e.g. "A good frame could also be derived by error tracking methods,"* **from Seckin in [0080]**).

12. In regard to claim 9, **Seckin-Mandato** teaches the method according to claim 8, wherein said set of rules defined by at least one of said quality metrics classes comprises:

deciding an intra-coded frame of said at least one media stream to be a good frame, if it is completely received, and to be a corrupted frame otherwise, or

deciding a predictively coded frame of said at least one media stream to be a good frame, if it is completely received, and if all of prediction reference samples of said predictively coded frame belong to good frames, and to be a corrupted frame otherwise (*see frame as considered good when it is received and subsequent related frames are received and considered to be good, e.g. "Corruption duration, M, is the time period from the NPT time of the last good frame before the corruption, to the NPT time of the first subsequent good frame or the end of the reporting period (whichever is sooner). A corrupted frame may either be an entirely lost frame, or a media frame that has quality degradation and the decoded frame is not the same as in error-free decoding. A good frame is a "completely received" frame X that,"* **from Seckin in [0074]**).

13. In regard to claim 10, **Seckin-Mandato** teaches the method according to claim 1, wherein said set of rules defined by at least one of said quality metrics classes comprises:

deciding a coded frame of said at least one media stream to be a good frame according to a decoding quality evaluation algorithm (*see lost and erroneous parts, e.g. "corrupted frame may either be an entirely lost frame, or a media frame that has quality*

degradation and the decoded frame is not the same as in error-free decoding," **from Seckin in [0074] Lines 4-7**).

14. In regard to claim 12, **Seckin-Mandato** teaches the method according to claim 1, wherein said protocol is a real-time streaming protocol in combination with a session description protocol in the context of a packet-switched streaming service of a third generation mobile communications system server (*see "Client/Server Negotiation,"* **in Fig. 2 ,** *e.g. "In a specific but non-limiting embodiment, the RTSP and SDP-based protocol extensions are used for transport and negotiation of the QoE metrics between the packet switched streaming service (PSS) client 102 and the PSS server 100... An example embodiment of the negotiation and transport processes of a QoE protocol 116,"* **from Seckin in [0028]**).

15. In regard to claim 13, **Seckin-Mandato** teaches the method according to claim 12, wherein said session description protocol comprises at least one session description protocol attribute (*e.g. "SDP that contains QoE-Metrics attribute,"* **from Seckin in [0029] Lines 4-5**) that defines at least one quality metrics class field (*e.g. "pre-negotiation will focus on having peers agreeing on the types of QoS classes to use, with respect to the capabilities of each peer,"* **from Mandato in [0103] Lines 4-6**), wherein said quality metrics class field is capable of identifying each quality metrics class of said pre-defined set of at least two quality metrics classes (*e.g. "All the metrics defined*

below are applicable to at least one of audio, video, speech and timed text media types," **from Seckin in [0073] Lines 1-2**).

One would be motivated to combine **Mandato** with **Seckin** for reasoning set forth above in claim 3.

16. In regard to claim 14, **Seckin-Mandato** teaches the method according to claim 13, wherein said real-time streaming protocol is used to negotiate a quality metrics class (*e.g. "pre-negotiation will focus on having peers agreeing on the types of QoS classes to use, with respect to the capabilities of each peer,"* **from Mandato in [0103] Lines 4-6**) between a client which said media stream is streamed and a server to which said quality of said streaming is reported at least partially based on said session description protocol attribute (*see "Client/Server Negotiation,"* **in Fig. 2 ,** *e.g. "In a specific but non-limiting embodiment, the RTSP and SDP-based protocol extensions are used for transport and negotiation of the QoE metrics between the packet switched streaming service (PSS) client 102 and the PSS server 100... An example embodiment of the negotiation and transport processes of a QoE protocol 116,"* **from Seckin in [0028]**).

One would be motivated to combine **Mandato** with **Seckin** for reasoning set forth above in claim 3.

17. In regard to claim 15, **Seckin-Mandato** teaches the method according to claim 14, wherein said real-time streaming protocol uses a DESCRIBE method for said negotiation (*see "Client/Server Negotiation,"* **in Fig. 2 ,** *e.g. "In a specific but non-limiting*

embodiment, the RTSP and SDP-based protocol extensions are used for transport and negotiation of the QoE metrics between the packet switched streaming service (PSS) client 102 and the PSS server 100... An example embodiment of the negotiation and transport processes of a QoE protocol 116," **from Seckin in [0028]**).

19. Claim 17 is a corresponding computer readable medium claim of method claim 1; therefore, it is rejected under the same rationale.

19. Claim 18 is a corresponding system claim of method claim 1 (*see "Client/Server Negotiation,"* **from Seckin in Fig. 2)**; therefore, it is rejected under the same rationale.

20. Claim 19 is a corresponding apparatus claim (client) of method claim 1 (*see "Client/Server Negotiation,"* **from Seckin in Fig. 2)**; therefore, it is rejected under the same rationale.

21. Claim 20 is a corresponding apparatus claim (server) of method claim 1 (*see "Client/Server Negotiation,"* **from Seckin in Fig. 2)**; therefore, it is rejected under the same rationale.

22. Claim 21 is a corresponding apparatus claim (server) of method claim 1 (*see "Client/Server Negotiation,"* **from Seckin in Fig. 2)**; therefore, it is rejected under the same rationale.

23. Claim 24 is a corresponding method claim of apparatus claim 20 (*see "Client/Server Negotiation,"* **from Seckin in Fig. 2**); therefore, it is rejected under the same rationale.

24. Claims 25-31 and 33-36 are corresponding apparatus claim of method claims 2-4, 7-10 and 12-15 (*see "Client/Server Negotiation,"* **from Seckin in Fig. 2**); therefore, they are rejected under the same rationale.

25. In regard to claim 37, **Seckin-Mandato** teaches the apparatus according to claim 19, wherein said apparatus is a client to which said media stream is streamed (*see "Client,"* **in Fig. 1 [102]**, *e.g. "Audio specific description of metrics (corruptions) is monitored and reported every 20 seconds, for example, from the beginning until the end of the stream,"* **from Seckin in [0057] Lines 9-12**), wherein said streaming is controlled by a protocol operated between said client and a server, and wherein said quality of said streaming is reported to said server (*see "QoE Protocol,"* **in Fig. 1 [116]**, *e.g. "In a specific but non-limiting embodiment, the RTSP and SDP-based protocol extensions are used for transport and negotiation of the QoE metrics between the packet switched streaming service (PSS) client 102 and the PSS server 100... An example embodiment of the negotiation and transport processes of a QoE protocol 116,"* **from Seckin in [0028]**).

26. In regard to claim 38, **Seckin-Mandato** teaches the apparatus according to claim 19, wherein said media stream is a continuous media stream (*e.g. ", from the beginning until the end of the stream,"* **from Seckin in [0057] Lines 9-12**).

27. In regard to claim 39, **Seckin-Mandato** teaches the apparatus according to claim 20, wherein said apparatus is a server, wherein said at least one media stream is streamed to a client (*see "Client and Server,"* **in Fig. 1 [100][102]**, *e.g. "Audio specific description of metrics (corruptions) is monitored and reported every 20 seconds, for example, from the beginning until the end of the stream,"* **from Seckin in [0057] Lines 9-12**), wherein said streaming is controlled by a protocol operated between said client and said server, and wherein said quality of said streaming is reported to said server (*see "QoE Protocol,"* **in Fig. 1 [116]**, *e.g. "In a specific but non-limiting embodiment, the RTSP and SDP-based protocol extensions are used for transport and negotiation of the QoE metrics between the packet switched streaming service (PSS) client 102 and the PSS server 100... An example embodiment of the negotiation and transport processes of a QoE protocol 116,"* **from Seckin in [0028]**).

28. In regard to claim 40, **Seckin-Mandato** teaches the method according to claim 1, wherein said at least one media stream is streamed to a client, wherein said streaming is controlled by a protocol operated between said client and a server client (*see "Client and Server,"* **in Fig. 1 [100][102]**, *e.g. "Audio specific description of metrics (corruptions) is monitored and reported every 20 seconds, for example, from the*

beginning until the end of the stream," **from Seckin in [0057] Lines 9-12**), and wherein said quality of said streaming is reported to said server (*see "QoE Protocol,"* **in Fig. 1 [116]**, *e.g. "In a specific but non-limiting embodiment, the RTSP and SDP-based protocol extensions are used for transport and negotiation of the QoE metrics between the packet switched streaming service (PSS) client 102 and the PSS server 100... An example embodiment of the negotiation and transport processes of a QoE protocol 116,"* **from Seckin in [0028]**).

29. Claim 41 recites similar limitations to the limitations in claim 40, therefore, it is rejected under the same rationale.

30. Claims 11 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seckin-Mandato in view of NPL "The Error Concealment Feature in the H.26L Test Model" 2002 to Wang et al. (hereinafter referred to as Wang).

31. In regard to claim 11, **Seckin-Mandato** teaches the method according to claim 10, wherein said set of rules defined by at least one of said quality metrics classes comprises:

deciding an intra-coded frame of said at least one media stream to be a good frame, if it is completely received at said client, and to be a corrupted frame otherwise (*e.g. "A good frame is a "completely received" frame,"* **from Seckin in [0074] Lines 7-8**), or

deciding a predictively coded frame of said at least one media stream to be a good frame, if it is completely received and all prediction reference samples of said predictively coded frame belong to good frames, or

or if at least a part of said frame is completely received, all prediction reference samples of said completely received parts of said frame belong to good frames(*see frame as considered good when it is received and subsequent relate frames are received and considered to be good, e.g. "Corruption duration, M, is the time period from the NPT time of the last good frame before the corruption, to the NPT time of the first subsequent good frame or the end of the reporting period (whichever is sooner). A corrupted frame may either be an entirely lost frame, or a media frame that has quality degradation and the decoded frame is not the same as in error-free decoding. A good frame is a "completely received" frame X that,"* **from Seckin in [0074]**), but

Seckin-Mandato do not teach that all concealed parts of said frame are considered as good, wherein concealed parts of said frame are obtained by applying an error concealment algorithm to lost or erroneous parts of a decoded version of said frame, and wherein said concealed parts are considered as good if an average boundary difference between said concealed parts and surrounding completely received and decoded parts of said frame is below a threshold.

However, **Wang** teaches using an error concealment algorithm to classify frames as good when they are received with intra frame corrupted Macro Blocks when the total average Motion Vector is less than a preset threshold (*e.g. "If the average MV is smaller than a pre-defined threshold (currently % pixels for each MV component), all lost slices*

are concealed by copying from the spatially corresponding positions in the reference frame. Otherwise, motion-compensated error concealment is used, and the MVs of the lost MBs are predicted as described in the following paragraphs," **from Wang in Sect. 3.2 [P2]**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to add the feature of classifying frames as good when an average of frame blocks are considered to be below a threshold, as disclosed in **Wang**, into the teachings of **Seckin-Mandato**, since both references are directed to streaming media packets, hence, would be considered to be analogous based on their related fields of endeavor.

One would be motivated to do so as **Seckin-Mandato** is already concerned with the determination of whether a frame is considered good or not *(e.g. "Corruption duration, M, is the time period from the NPT time of the last good frame before the corruption, to the NPT time of the first subsequent good frame or the end of the reporting period (whichever is sooner). A corrupted frame may either be an entirely lost frame, or a media frame that has quality degradation and the decoded frame is not the same as in error-free decoding. A good frame is a "completely received" frame X that,"* **from Seckin in [0074]**) and **Wang** enhances **Seckin-Mandato** by increasing the number of frames considered to be "good" by providing an error threshold to allow frames with minimal data corruption in digital media streams (e.g. *"more flexible network adaptation, and enhanced error robustness,"* **from Wang in Section 1 P[1]**).

32. Claim 32 is a corresponding apparatus claim of method claim; therefore, it is rejected under the same rationale.

Claim Rejections - 35 USC § 102

33. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

34. Claim 23 is rejected under 35 U.S.C. 102(e) as being anticipated by Seckin.

35. In regard to claim 23, **Seckin** teaches an apparatus (*see "Server,"* **in Fig. 1 [100]**, comprising:

a quality data processing instance (*see "QoE Server Module,"* **in Fig. 1 [108]**) for evaluation and analysis for improving quality of a streaming application by enhancing a data rate of the application depending upon frequency of re-buffering events (*e.g. "The QoE Server Module 108 interacts with the DBA module 104: To impact decisions to increase bitrate based on statistical QoE result,"* **in [0124][0125] and** *e.g. "the "Metrics-Name Rebuffering_Duration" for the QoE-Feedback header,"* **in [0091]**); and

a real-time streaming protocol entity configured to receive a reported quality of a streaming of at least one media stream said quality is reported based on at least one selected quality metric (*e.g. "a new RTSP header is defined to enable the PSS client 102 and server 100 to negotiate which Quality of Experience (QoE) metrics that the PSS client 102 should send, how often the metrics should be sent, and how to turn the metrics transmission,"* **in [0037] Lines 1-5)**, wherein said at least one selected quality metric is a quality of experience metric that is at least partially based on a decision whether at least one frame of said at least one media stream is a good frame (*e.g. "Corruption duration, M, is the time period from the NPT time of the last good frame before the corruption, to the NPT time of the first subsequent good frame or the end of the reporting period (whichever is sooner),"* **in [0074] Lines 1-4**), said quality of said streaming further reported based on a quality metrics class selected from a pre-defined set of at least two quality metrics classes, wherein each quality metrics class in said pre-defined set of at least two quality metrics classes defines a different set of rules on how to decide whether a frame of said at least one media stream is a good frame (*see Corruption Duration defining rules on how to handled Speech, Audio, and Video individually, e.g. "All the metrics defined below are applicable to at least one of audio, video, speech and timed text media types,"* **in [0073] Lines 1-2**).

Response to Arguments

36. In the Arguments/Remarks Applicant argued in substance that:

(A) Seckin is not prior art because the Provisional Applications

PI: - **Seckin's** first Provisional Application No. **60/497,447** (Express Mail No. EV336616129US) filed August 21, 2003;

P2: - **Seckin's** second Provisional Application No. **60/539,536** (Express Mail No. EV336591841US) filed January 26, 2004

do not disclose the subject matter of "reporting of the quality of the streaming is based on a selected quality metrics class, wherein the selected quality metrics class is selected from a pre-defined set of at least two quality metrics classes, and the subject matter of previous claim 6 further requiring that each quality metrics class in the pre-defined set of at least two quality metrics classes defines a different set of rules on how to decide whether a frame of the at least one media stream is a good frame," because neither **P1** nor **P2** disclose different quality metric "classes" with respectively different set of rules on how to decide on a good frame, and **Mandato** does not cure **Seckin's** deficiencies or relate to media quality metric classes at all. **(Pages 14-19)**

As to Argument A, Examiner respectfully disagrees with Applicant, after further considering the amended claims and different versions of "6 PSS Quality Metrics Permanent Documents," which **Seckin** and the **Present Invention** are both based upon, and the Examiner has reinterpreted the meaning of "quality metric classes," which is broadly referred to in Applicant's Specification and provides no examples of different types of classes; and **Seckin** discloses different types of metrics such as Audio, Video, and Speech (*e.g. "All the metrics defined below are applicable to at least one of audio,*

video, speech and timed text media types," **in [0073] Lines 1-2**), which Applicant's Specification also discloses as prior art **(Pg. 6, Paragraphs 3-4),** which is similar in number to the different "quality metric classes," (*e.g. "The modified negotiation RTSP header 3 of Fig. 3 provides an additional RTSP field Metrics-class, which may either have the values "0", "1" or 2,"* **on Pg. 21 Paragraph 2 of Specification**), and a "class" is broad terminology which could also be interpreted as a type or category, which is clearly taught by **Seckin** and supported by **P1** and **P2,** wherein different media types have different respective rules for what exactly is considered to be a "good frame," and although **Seckin** teaches different classification types of Quality Metrics, **Seckin** fails to teach that a classification type section is included in the header of the RTSP packet (*see RTSP header as part of Packet (protocol data unit),* **in TABLE of [0037] Line 12,** *e.g. "a new RTSP header is defined to enable the PSS client 102 and server 100 to negotiate which Quality of Experience (QoE) metrics that the PSS client 102 should send, how often the metrics should be sent, and how to turn the metrics transmission,"* **from Seckin in [0037] Lines 1-5),** which is believed to be Applicant's novel addition to the 6 PSS Quality Metrics Permanent Documents."

However, **Mandato** is directed toward efficiently negotiation upon quality parameters between devices, and discloses an algorithm that can be incorporated into many different quality reporting architectures (*e.g. "key aspect of the E2ENP is that it can be used... with other types of QoS architectures. In the latter case, pre-negotiation will focus on having peers agreeing on the types of QoS classes to use,"* **from Mandato in [0103]**), and it would be obvious to one of ordinary skill in the art to try and add an

already set media type category into a header negotiation packet in order to prevent wasted time spent negotiation media types that are not applicable in a streaming session (*e.g. "pre-negotiation will focus on having peers agreeing on the types of QoS classes to use, with respect to the capabilities of each peer,"* **from Mandato in [0103] Lines 4-6**), and since **Seckin's** different types are directed towards types of media, it is well known in the art that communication between different types of devices commonly occurs, where one device may have audiovisual capabilities while another device may only be an auditory device, and **Mandato** enhances **Seckin** by allowing only the necessary capabilities of a device to be considered in determining a level of service; thereby reducing the amount of time required to negotiate a QoS agreement (*e.g. "The benefit of this approach is that the time necessary for re-negotiation is reduced because the peers have only to refer to a negotiated state instead of performing a full negotiation cycle during streaming,"* **from Mandato in [0092]**); therefore, the combination of **Seckin** and **Mandato** suggest reporting quality metrics having different metric types and negotiation of the different types in the RTSP header packet.

Conclusion

37. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

38. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN WILLIS whose telephone number is (571)270-7467. The examiner can normally be reached on 8:00 A.M. - 6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571)272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JONATHAN WILLIS/
Examiner, Art Unit 2445

/Andrew Caldwell/
Supervisory Patent Examiner, Art Unit 2445